

# Summary of Product Characteristics

## 1 NAME OF THE MEDICINAL PRODUCT

Minims Prednisolone Sodium Phosphate 0.5% w/v Eye Drops, Solution

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Prednisolone sodium phosphate 0.5 % w/v.

Excipients with known effect

Sodium dihydrogen phosphate dihydrate

(0.07 mg phosphates in each drop equivalent to 1.83mg/ml)

For full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Eye drops, solution

Clear, colourless, aqueous, single-use eye drops, solution.

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic Indications

Non-infected inflammatory conditions of the eye.

### 4.2 Posology and method of administration

#### Adults and the elderly

One or two drops applied topically to the eye as required.

#### Paediatric population

At the discretion of the physician.

### 4.3 Contraindications

Use of this medicine is contraindicated in patients with a known hypersensitivity to the active ingredient.

Use is also contraindicated in viral, fungal, tuberculosis and other bacterial infections.

Prolonged application to the eye of preparations containing corticosteroids has caused increased intra-ocular pressure and, therefore, the drops should not be used in patients with glaucoma.

In children, long-term, continuous topical corticosteroid therapy should be avoided due to possible adrenal suppression.

### 4.4 Special warnings and precautions for use

Care should be taken to ensure that the eye is not infected before Minims Prednisolone is used.

Topical corticosteroids should not be used for longer than one week, except under ophthalmic supervision with regular checks of intra-ocular pressure.

Systemic absorption may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops. (This blocks the passage of drops via the naso-lacrimal duct to the wide absorptive area of the nasal and pharyngeal mucosa. It is especially advisable in children).

#### Visual disturbance

Visual disturbance may be reported with systemic and topical corticosteroid use. If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids.

#### **4.5 Interaction with other medicinal products and other forms of interactions**

Corticosteroids are known to increase the effects of barbiturates, sedative hypnotics and tricyclic antidepressants.

They will, however, decrease the effects of anticholinesterases, antiviral eye preparations and salicylates

Co-treatment with CYP3A inhibitors, including cobicistat-containing products, is expected to increase the risk of systemic side-effects. The combination should be avoided unless benefit outweighs the increased risk of systemic corticosteroid side-effects, in which case patients should be monitored for systemic corticosteroid side-effects.

#### **4.6 Fertility, pregnancy and lactation**

Topical administration of corticosteroids to pregnant animals can cause abnormalities of foetal development and although the relevance of this finding to human beings has not been established, the use of Minims Prednisolone during pregnancy should be avoided.

#### **4.7 Effects on ability to drive and use machines**

Not relevant.

#### **4.8 Undesirable effects**

##### Eye disorders

Not known: vision, blurred (see also section 4.4)

Prolonged treatment with corticosteroids in high dosage is occasionally associated with corneal thinning, perforation and subcapsular lenticular opacities.

The systemic effects of steroids are possible following the use of Minims Prednisolone, but are unlikely due to the reduced absorption of topical eye drops.

Cases of corneal calcification have been reported very rarely in association with the use of phosphate containing eye drops in some patients with significantly damaged corneas.

#### **Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via: HPRC Pharmacovigilance, Earlsfort Terrace; IRL - Dublin 2. Tel: +353 1 6764971; Fax: +353 1 6762517; Website: [www.hpra.ie](http://www.hpra.ie); e-mail: [medsafety@hpra.ie](mailto:medsafety@hpra.ie).

#### **4.9 Overdose**

As Minims are single-dose units, overdose is unlikely to occur.

### **5 PHARMACOLOGICAL PROPERTIES**

#### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Corticosteroids, plain, ATC code: S01BA04

### Mechanism of action

The actions of corticosteroids are mediated by the binding of the corticosteroid molecules to receptor molecules located within sensitive cells. Corticosteroid receptors are present in human trabecular meshwork cells and in rabbit iris ciliary body tissue.

Prednisolone, in common with other corticosteroids, will inhibit phospholipase A2 and thus decrease prostaglandin formation.

The activation and migration of leucocytes will be affected by prednisolone. A 1% solution of prednisolone has been demonstrated to cause a 5.1% reduction in polymorphonuclear leucocyte mobilisation to an inflamed cornea. Corticosteroids will also lyse and destroy lymphocytes. These actions of prednisolone all contribute to its anti-inflammatory effect.

## **5.2 Pharmacokinetic properties**

The oral availability, distribution and excretion of prednisolone is well documented. A figure of  $82 \pm 13\%$  has been quoted as the oral availability and  $1.4 \pm 0.3\text{ml/min/kg}$  as the clearance rate. A half life of 2.1 - 4.0 hours has been calculated.

With regard to ocular pharmacokinetics, prednisolone sodium phosphate is a highly water soluble compound and is almost lipid insoluble. Therefore, theoretically it should not penetrate the intact corneal epithelium. Nevertheless, 30 minutes after instillation of a drop of 1% drug, corneal concentrations of  $10\mu\text{g/g}$  and aqueous levels of  $0.5\mu\text{g/g}$  have been attained. When a 0.5% solution was instilled in rabbit eyes every 15 minutes for an hour, an aqueous concentration of  $2.5\mu\text{g/ml}$  was measured. Considerable variance exists in the intra-ocular penetration of prednisolone depending on whether the cornea is normal or abraded.

### Absorption

It can be seen that only low levels of prednisolone will be absorbed systemically, particularly where the cornea is intact.

Any prednisolone which is absorbed will be highly protein-bound in common with other corticosteroids.

## **5.3 Preclinical safety data**

The use of prednisolone in ophthalmology is well-established. Little specific toxicology work has been reported, however, the breadth of clinical experience confirms its suitability as a topical ophthalmic agent.

# **6 PHARMACEUTICAL PARTICULARS**

## **6.1 List of excipients**

Disodium edetate  
Sodium dihydrogen phosphate dihydrate  
Sodium chloride  
Sodium hydroxide solution (for pH-adjustment)  
Purified water

## **6.2 Incompatibilities**

Not applicable.

## **6.3 Shelf life**

Unopened: 15 months.

## **6.4 Special precautions for storage**

Do not store above  $25^{\circ}\text{C}$ . Do not freeze. Store in the original package.

### **6.5 Nature and contents of container**

A sealed conical shaped polypropylene container fitted with a twist and pull off cap. Each Minims unit is overwrapped in an individual polypropylene/paper pouch. Each container holds approximately 0.5 ml of solution. There are 20 Minims units in every carton.

### **6.6 Special precautions for disposal**

For single use only. Discard any unused solution.

## **7 MARKETING AUTHORISATION HOLDER**

Bausch + Lomb Ireland Limited  
3013 Lake Drive  
Citywest Business Campus  
Dublin 24  
D24 PPT3  
Ireland

## **8 MARKETING AUTHORISATION NUMBER**

PA23259/019/001

## **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 18 February 1982

Date of last renewal: 18 February 2007

## **10 DATE OF REVISION OF THE TEXT**

June 2022